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U1S S1679

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US 5692609 A US 4930628 A

(58) Field of Search

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PW

INT CL<sup>7</sup> B25H 3/00 3/02 3/04 3/06

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(54) Abstract Title

Toolbox

(57) A toolbox includes a cover 2 pivotally connected to and releasably engaged with a the casing 1. The casing 1 includes shaped grooves 11 for receiving tools and a handle 12. A bottom of the casing 1 includes two holes 15 and two lower corner areas of the casing 1 are cut to form a space 16. Each of two lateral walls of the casing 1 includes an end face 17 facing the space. The cover 2 has two lateral arms 26 with an opening 21 therebetween. Each arm 26 has a pintle 22 engaged with an associated hole 15 of the casing. The cover 2 is pivotable to a first position for engaging with the casing in which the tools can be viewed via the opening 21 and a second position that supports the casing 1 in an inclined position in which the end faces 17 rest on an outer side of the cover 2.

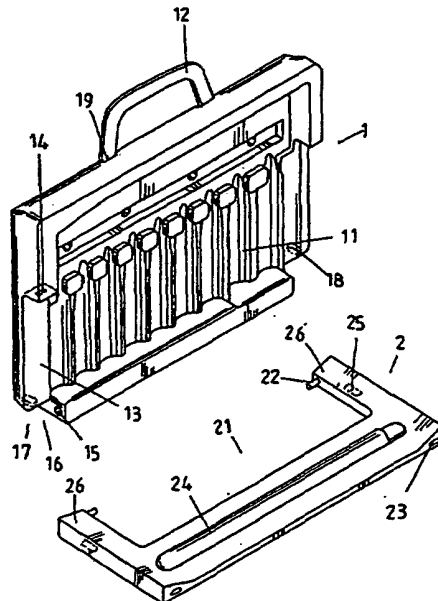


FIG. 1

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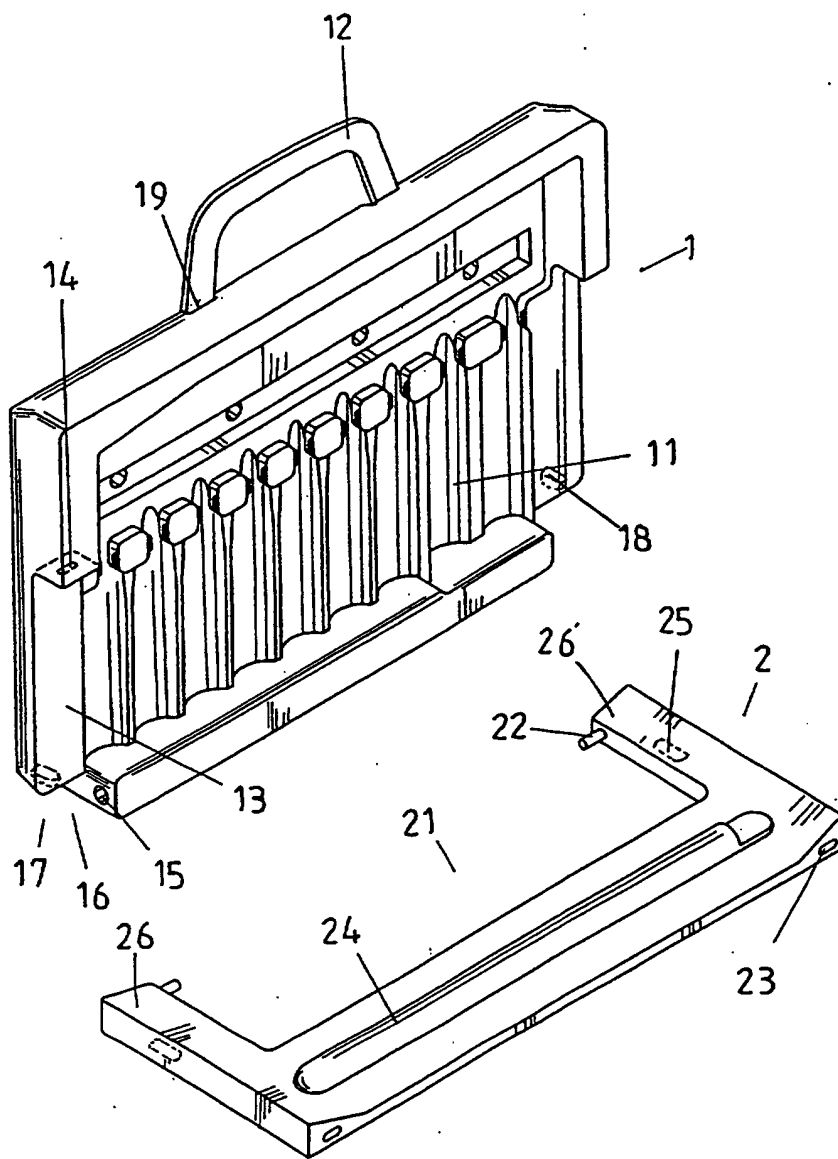


FIG. 1

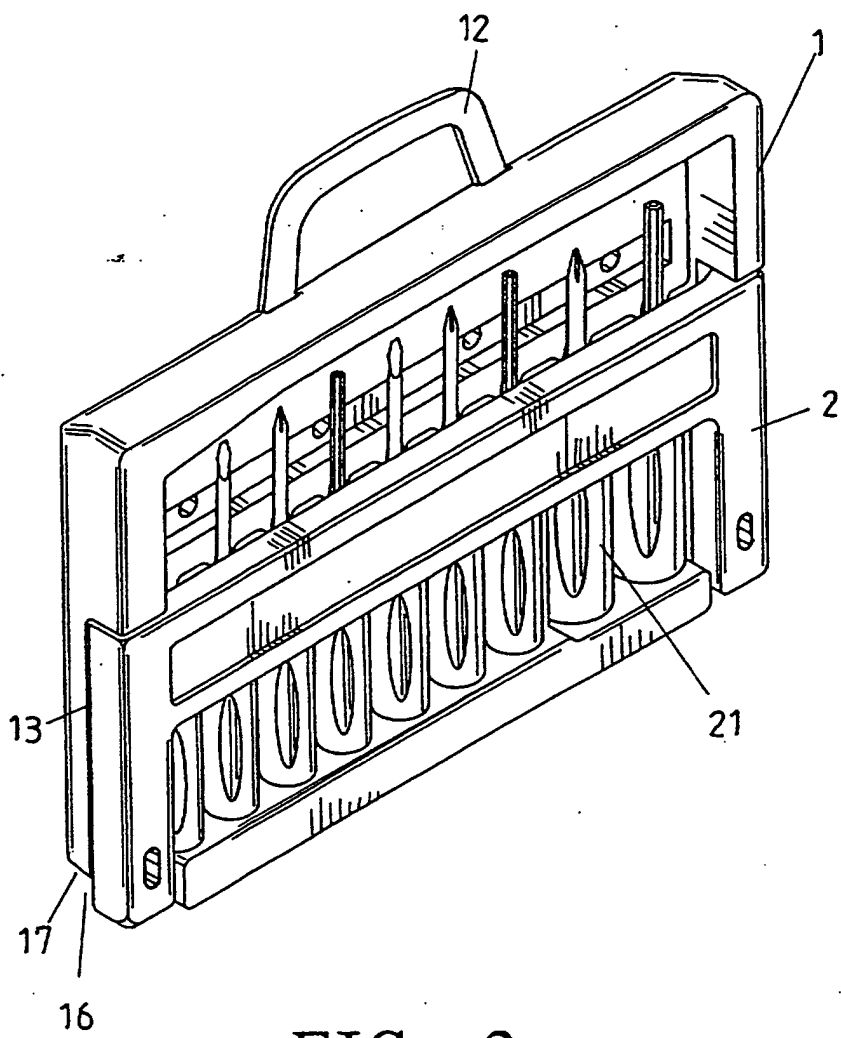


FIG. 2

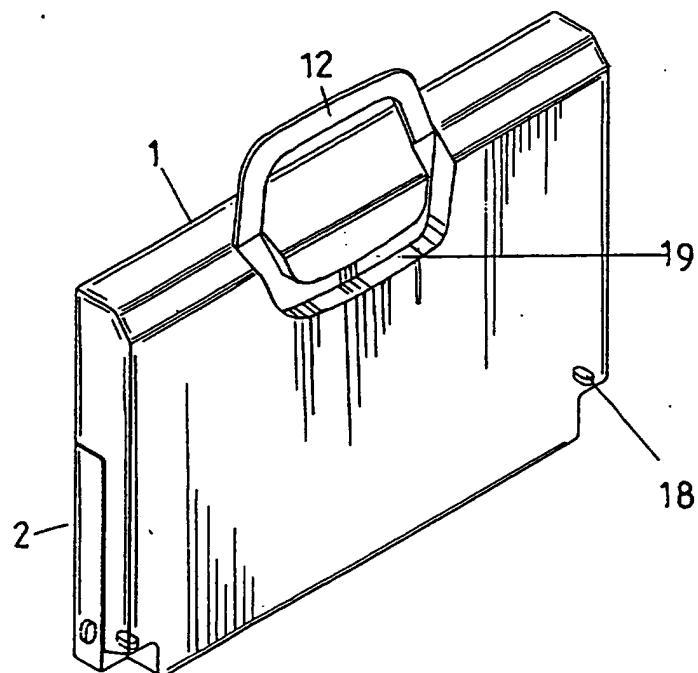


FIG. 3

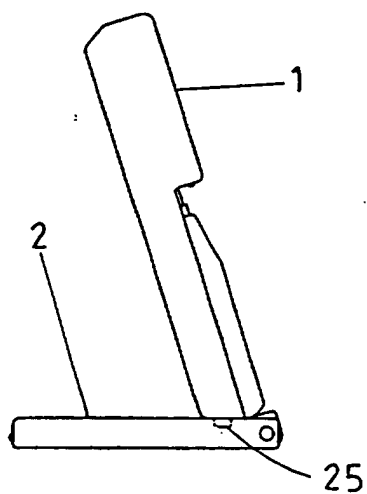


FIG. 4

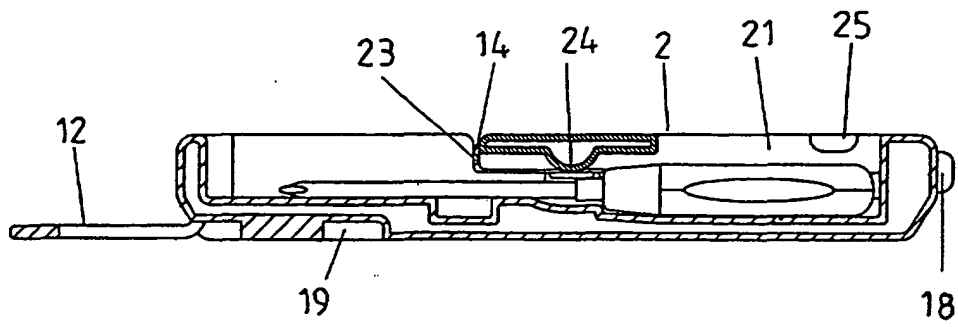


FIG. 5

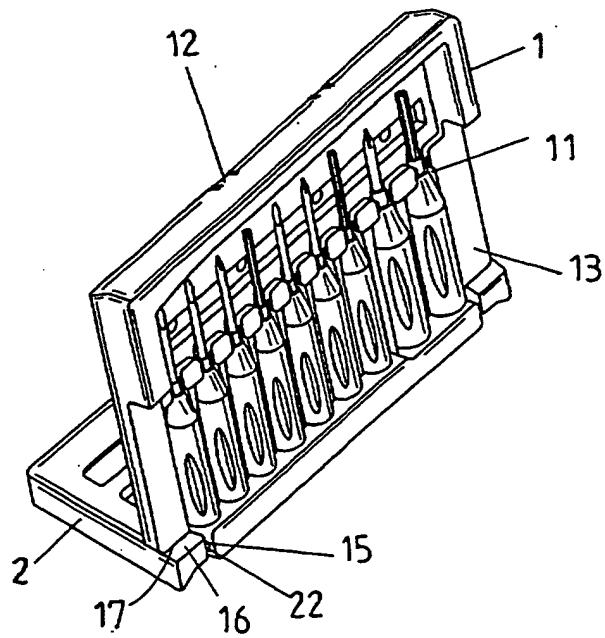


FIG. 6

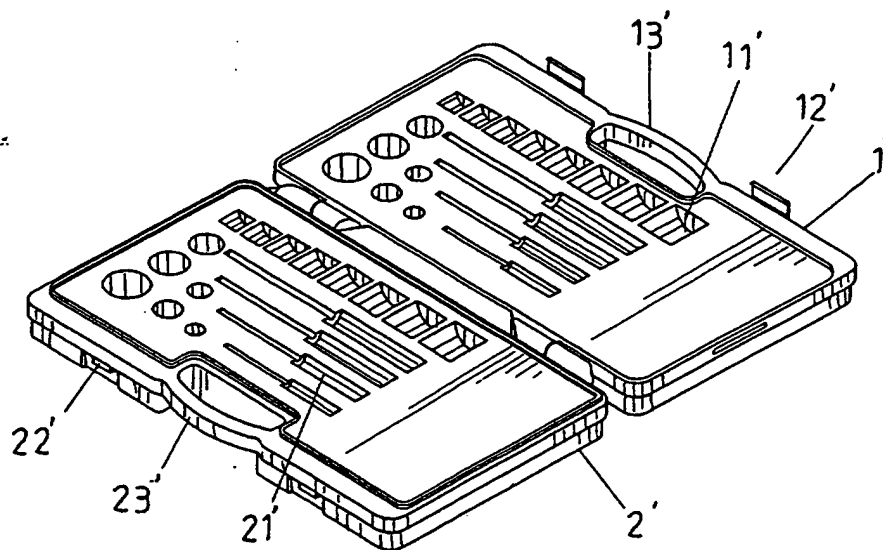


FIG. 7  
Prior Art

## Toolbox

### Background of the Invention

#### 1. Field of the Invention

The present invention relates to a notebook type toolbox that may be used as a display device for tools and that allows easy access to the tools and provides reliable tool-retaining effect.

#### 2. Description of the Related Art

Fig. 7 of the drawings illustrates a conventional toolbox having an upper casing 1' and a lower casing 2'. Each casing 1', 2' has a number of shaped grooves 11', 21' for receiving tools of different shapes and sizes. Each casing 1', 2' further has a handle 13, 23' for easy carriage. The upper casing 1' includes an engaging member 12' and the lower casing 2' has an engaging groove 22' for releasably engaging with the engaging member 12', thereby preventing falling of the tools out of the toolbox.

A drawback of such a toolbox is that the user cannot know what types of tools are carried in the toolbox unless it is opened. The toolbox cannot be used to display the tools therein, as the casings 1' and 2' both lie on the ground or table. In addition, the tools tend to fall out of the toolbox when the toolbox is opened, as no retaining member is provided to retain the tools in place.

The present invention is intended to provide an improved toolbox that mitigates and/or obviates the above problems.

### Summary of the Invention

A toolbox in accordance with the present invention comprises a casing and a cover pivotally connected to and releasably engaged with the casing. The casing includes a plurality of shaped grooves for receiving tools and a handle. The casing includes a bottom having two first pivotal sections formed on two ends thereof, respectively. Each of two lower corner areas of the casing is cut to form a space. Each of two lateral walls of the casing includes an end face facing the space. The cover has two lateral sides with a view opening therebetween. Each

1 lateral side has a second pivotal section pivotally engaged with an associated first pivotal  
2 section on the casing, thereby allowing relative pivotal movement between the cover and the  
3 casing. The cover is pivotable to a first position for engaging with the casing in which the  
4 tools are viewed via the view opening and a second position that supports the casing in an  
5 inclined status in which the end faces rest on an outer side of the cover.

6 The pivotal sections of the casing are two holes in two lateral end faces of the bottom,  
7 respectively, and the pivotal sections of the cover are pintles pivotally received in the holes.

8 The cover is substantially U-shape and has two arms. Each of two lateral sides of the  
9 casing has a recess in a lower portion thereof for receiving an associated arm of the cover  
10 when the casing is engaged with the cover. An end wall defining each recess has an engaging  
11 member formed thereon. The cover has two engaging members for releasably engaging with  
12 the engaging members on the casing. Each end face includes a first engaging portion, and each  
13 arm includes a second engaging portion configured to releasably engage with the first  
14 engaging portion of the casing when the casing is supported in the inclined status.

15 The casing has a handle pivotally attached thereto and a recessed portion is defined in a  
16 rear side of the casing thereof for receiving the handle.

17 Thus, the toolbox in accordance with the present invention is configured as a notebook  
18 and can be easily carried and supported in an inclined status for use or display.

19 Other objects, advantages, and novel features of the invention will become more  
20 apparent from the following detailed description when taken in conjunction with the  
21 accompanying drawings.

#### 22 **Brief Description of the Drawings**

23 Fig. 1 is an exploded perspective view of a toolbox in accordance with the present  
24 invention.

25 Fig. 2 is a front perspective view of the toolbox in accordance with the present  
26 invention.

27 Fig. 3 is a rear perspective view of the toolbox in accordance with the present invention.



1           Fig. 4 is a side view of the toolbox in Fig. 2 in a status for display or use.

2           Fig. 5 is a sectional view of the toolbox in accordance with the present invention.

3           Fig. 6 is a perspective view of the toolbox in a status for display or use.

4           Fig. 7 is a perspective view of a conventional toolbox.

5                           **Detailed Description of the Preferred Embodiment**

6           Referring to Figs. 1, 2, 5, and 6, a toolbox in accordance with the present invention  
7           generally includes a casing 1 and a cover 2. The casing 1 includes a plurality of shaped  
8           grooves 11 defined in a side thereof for receiving tools of different shapes and sizes. The  
9           casing 1 further includes a handle 12 formed on top thereof. Each of two lateral walls of the  
10          casing 1 includes a recess 13 in a lower portion thereof, and an engaging member 14 is  
11          provided on an end face defining the recess 13. A bottom of the casing 1 includes two pivotal  
12          sections 15 (in the form of holes) in two lateral end faces thereof, respectively. Each of two  
13          lower corner areas of the casing 1 is cut to form a space 16. Thus, each of two lateral walls of  
14          the casing 1 includes an end face 17 facing the space 16. Each end face 17 further includes an  
15          engaging portion 18.

16          The cover 2 is substantially U-shape and has two arms 26 with a view opening 21  
17          therebetween. Each arm 26 has a pivotal section 22 (in the form of a pintle) formed thereon.  
18          The pintle 22 is pivotally engaged in an associated hole 15, thereby allowing relative pivotal  
19          movement between the cover 2 and the casing 1. The cover 2 further includes engaging  
20          members 23 for releasably engaging with the engaging members 14 on the casing 1. The cover  
21          2 further includes a retaining ridge 24 on an inner side thereof that faces the shaped grooves 11.  
22          Each arm 26 further includes an engaging portion 25 configured to releasably engage with the  
23          engaging portion 18 of the casing 1.

24          In assembly, the pintles 22 of the cover 2 are pivotally received in the holes 15 of the  
25          casing 1. In use, after inserting tools into corresponding shaped grooves 11 in the casing 1, the  
26          cover 2 is pivoted to a position shown in Fig. 2 such that the tools may be retained in place by  
27          the retaining ridge 24 (Fig. 5), which is useful for carriage. In addition, all of the tools may be

1 directly viewed via the view opening 21 in the cover 2. Thus, the user may check the tools  
2 without opening the toolbox. The casing 1 and the cover 2 are securely engaged together by  
3 means of engagement between the engaging members 14 and 23. The recesses 13 of the casing  
4 1 receive two arms 26 of the cover 2, thereby providing an aesthetically pleasing effect.

5 When the user intends to use the tools or display the tools, the cover 2 may be pivoted to  
6 a position shown in Figs. 4 and 6 until the outer side of the cover 2 abuts the end faces 17 of  
7 the casing 1, thereby providing a reliable support for the casing 1 in an inclined status. Thus,  
8 the tools in the casing 1 may be displayed or accessed easily. The toolbox is reliably retained  
9 in the inclined status by means of engagement between the engaging portions 18 and 25.

10 Referring to Fig. 3, the casing 1 may include a recessed portion 19 in a rear side thereof  
11 for receiving the handle 12 that is pivotally attached to the casing 1. Thus, the overall  
12 appearance for the toolbox is aesthetically pleasing when in the status for use or display, best  
13 shown in Figs. 4 and 6. Thus, the toolbox in accordance with the present invention is  
14 configured as a notebook and can be easily carried and supported in an inclined status for use  
15 or display.

16 Although the invention has been explained in relation to its preferred embodiment, it is  
17 to be understood that many other possible modifications and variations can be made without  
18 departing from the spirit and scope of the invention as hereinafter claimed.

1     What is claimed is:

2     1. A toolbox comprising a casing and a cover pivotally connected to and releasably engaged  
3     with the casing, the casing including a plurality of shaped grooves for receiving tools and a  
4     handle, the casing including a bottom having two first pivotal sections formed on two ends  
5     thereof, respectively, each of two lower corner areas of the casing being cut to form a space,  
6     each of two lateral walls of the casing including an end face facing the space, the cover having  
7     two lateral sides with a view opening therebetween, each lateral side having a second pivotal  
8     section pivotally engaged with an associated said first pivotal section on the casing, thereby  
9     allowing relative pivotal movement between the cover and the casing, the cover being  
10    pivotal to a first position for engaging with the casing in which the tools are viewed via the  
11    view opening and a second position that supports the casing in an inclined status in which the  
12    end faces rest on an outer side of the cover.

13    2. The toolbox as claimed in claim 1, wherein the pivotal sections of the casing are two holes  
14    in two lateral end faces of the bottom, respectively, and the pivotal sections of the cover are  
15    pintles pivotally received in the holes.

16    3. The toolbox as claimed in claim 1, wherein the cover is substantially U-shape and has two  
17    arms.

18    4. The toolbox as claimed in claim 3, wherein each of two lateral sides of the casing has a  
19    recess in a lower portion thereof for receiving an associated said arm of the cover when the  
20    casing is engaged with the cover.

21    5. The toolbox as claimed in claim 4, wherein an end wall defining each said recess has an  
22    engaging member formed thereon, and the cover has two engaging members for releasably  
23    engaging with the engaging members on the casing.

24    6. The toolbox as claimed in claim 3, wherein each said end face includes a first engaging  
25    portion, and wherein each said arm further includes a second engaging portion configured to  
26    releasably engage with the first engaging portion of the casing when the casing is supported in  
27    the inclined status.

1     7. The toolbox as claimed in claim 1, wherein the casing has a handle pivotally attached  
2     thereto, the casing further including a recessed portion in a rear side thereof for receiving the  
3     handle.



Application No: GB 0024856.7  
Claims searched: 1 to 7

Examiner: Mike Henderson  
Date of search: 22 March 2001

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): B8P (PL4 PL5 PQ PW PE2C PE2G PE2X)

Int Cl (Ed.7): B25H 3/00 3/02 3/04 3/06

Other: ONLINE:WPI,EPODOC,JAPIO

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
A	US 5692609 (LIN) (Whole disclosure relevant)	
A	US 4930628 (BRIDGES) (Whole disclosure relevant)	

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X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

